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BAKER & HOSTETLER LLP  
Washington Square, Suite 1100  
1050 Connecticut Avenue, N.W.  
WASHINGTON, DC 20036

EXAMINER

ADDIE, RAYMOND W

ART UNIT PAPER NUMBER

3671

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/664,971

Applicant(s)

ALEXANDER ET AL.

Examiner

Raymond W. Addie

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/10/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/10/04, 3/31/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 18 is objected to because of the following informalities:

Claim 18 requires the 2<sup>nd</sup> end to be fixedly coupled and the 1<sup>st</sup> end to be flexibly coupled. Both limitations are in direct contrast to that which is in Claim 16, from which claim 18 depends. Claim 16 requires a means for fixedly coupling said 1<sup>st</sup> end and means for flexibly coupling said 2<sup>nd</sup> end. Appropriate correction is required.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

The brief description of figures 5, 6 must state that the embodiment represented therein are prior art embodiments and not the claimed invention. In accordance with the prior art labels in Figs. 5, 6. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 recites the phrase "a first anchor point; a second anchor point; at least one effective anchor point...wherein said at least one effective anchor point has a location along the line of action and which location relative to the pivot point changes as said ramp assembly rotates".

It appears as though claim 1 requires 2 anchor points that are actual structural features, that permit a biasing member to be attached to a ramp assembly and either a base assembly or a loading dock. As well as multiple "effective anchor point(s)" which are not actual structural features, but rather imaginary points along a line of action, which itself is defined as being an imaginary line extending between the 1<sup>st</sup> and 2<sup>nd</sup> actual anchor points. Hence, the structural limitations implied by "at least one effective anchor point" is indefinite.

Further, the scope of what would be considered an "effective anchor point" is also indefinite, since even a detailed reading of the Applications' Specification would not enable one of ordinary skill in the art, to make or use the claimed invention.

Still further, it is unclear as to how the location of the "at least one effective anchor point"(s) is changed relative to the pivot point in response to the rotation of the ramp assembly. How exactly does the rotation of the ramp assembly cause a change in the location of an imaginary point?

Still further, do the other of the "at least one" effective anchor points stay stationary relative to the pivot point, as the ramp assembly rotates? Do the other of the "at least

one" effective anchor points move relative to the pivot point, as the ramp assembly rotates? If so where to the other effective anchor points go to and what causes a change in their location along the line of action, relative to the pivot point, as the ramp assembly rotates?

Hence, for the reasons cited above, it is indefinite as to what is being claimed, what if any art recognized equivalents exist in the field of application and it is not believed that one of ordinary skill in the art, would be able to make or use the claimed invention.

**For Examination purposes** the Examiner puts forth the following prior art and a 1<sup>st</sup> Grounds of Rejection, based on the disclosure of said prior art and how they anticipate or render obvious the claimed invention.

Further, Claims 16-18 are seen to explicitly recite "means for" claim language, in an intentional attempt to invoke 35 U.S.C. 112 6<sup>th</sup> paragraph consideration of the cited claims. Hence, the claims are being examined in accordance with 112 6<sup>th</sup> paragraph.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

Claim 16, Ins. 10-13 recite "camming means configured to selective engage the means

for flexibly coupling such that the tension means is deflected away from the direct line of action when the tension means is incorporated in the dock leveler and the ramp assembly rotates".

The structural cooperative relationship "when the tension means is incorporated in the dock leveler" is unclear. Obviously if the tension means is not incorporated in the dock leveler, then the camming means and the means for flexibly coupling the tension means, couldn't possibly deflect a tension means that is not connected to the dock leveler at the time the ramp assembly is rotating.

Hence, the actual limitation implied by the cited claim language is indefinite.

**For Examination purposes:** If the direct line of action is defined as being a line between the anchor points, then the limitation is seen to require the camming means to deflect the spring away from the claimed "line of action", in cooperation with the means for flexibly coupling.

Claim 10 recites the phrase "when the ramp assembly is in the operative position"; whereas claim 1 recites "one or more lowered operating positions". Hence, it is unclear as to which of the one or more lowered operating position. For examination purposes a horizontal operating position is being interpreted into claim 10.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Dieter # 3,636,578.

Dieter discloses a dock leveler capable of rotating from a vertical, upwardly extending storage/barrier position (see figs. 1, 4) to any of a plurality of lower, inclined, working positions (see figs. 5, 6), for connecting with and servicing cargo trucks.

Said dock leveler comprising:

A base assembly (80, 62).

A ramp assembly (34, 44) configured to rotate about a pivot pin (38).

A 1<sup>st</sup> anchor point disposed on the ramp assembly at (34).

A 2<sup>nd</sup> anchor point (90) disposed on the base assembly at (80).

A biasing member, in the form of a spring (88) having a central longitudinal axis defining a line of action.

Wherein the biasing member is coupled to the ramp assembly at (34) the 1<sup>st</sup> anchor point; and is coupled to the base assembly (80) at (90), the 2<sup>nd</sup> anchor point.

Further, wherein the center of the line of action, (anywhere on the spring (88)), changes

Art Unit: 3671

in location and distance relative to the pivot point (38), when the ramp assembly is rotated. See Figs. 3, 4.

In regards to Claims 2- 4 Dieter discloses the biasing member (88) is spring coupled to the second anchor point (90) via a flexible member (90), such that an attachment point between the flexible member (90) and the spring (88) defines an effective anchor point. See col. 4, Ins. 1-42.

In regards to claims 7, 8 Dieter discloses the base assembly (80, 62) comprises a cam plate (62) having at least one cam surface (72, 92) that are shaped to deflect the line of action of the spring (88) as the ramp assembly rotates, resulting from the at least one cam surface (72) selectively engaging the flexible member (80).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beckwith et al. # Beckwith et al., in view of Druzynski # 5,335,451.

Beckwith et al. discloses a dock leveler comprising:



A base assembly (34, 20, 18) mounted in a pit of a loading dock (12).

A ramp assembly (24, 28, 44), which is configured to rotate about a pivot point (26) from an upwardly, vertically stored position to any of multiple lower, operating positions, including above, below and at a level of the dock top surface (16).

A counter balance assembly (40, 36, 48) comprising:

A 1<sup>st</sup> and 2<sup>nd</sup> anchor points (44, 42) respectively.

A biasing member (36) mounted to the ramp assembly at a 1<sup>st</sup> anchor point on bar (44), and to the base assembly (34) at said 2<sup>nd</sup> anchor point (42), via fixed/non-flexible members. Said biasing member (36) defining a "direct line of action" between said anchor points.

What Beckwith et al. does not disclose is a counter balance assembly having selectively biased forces.

However, Druzynski teaches a spring-based, counter balance assembly capable of selectively biasing metal plate from a vertical and horizontal positions.

Said counter balance system comprising:

At least one biasing member (18) fixedly attached to a 1<sup>st</sup> anchor point (22), which is disposed upon a metal plate (12) for rotation about a pivot point (20).

Said biasing member (18) being flexibly attached to a 2<sup>nd</sup> anchor point (26) via a flexible coupling device (24), such as chain.

Said biasing member defining a "direct line of action between said anchor points, when said metal plate is in either a vertical or horizontal position. See col. 2, ln. 34-col. 37.

Wherein the biasing member is deflected away from the "direct line of action" as the metal plate (12) is rotated between the vertical and horizontal positions. Resulting in lower torque forces needed to bias the plate in a desired direction, as shown in Fig. 6. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with the counter balance assembly as taught by Druzynski, in order to minimize the spring forces required to rotate the ramp assembly to a vertical position. See Col. 3, ln. 1-col. 4, ln. 32.

In regards to claim 2-6 Beckwith et al. discloses the claimed dock leveler as put forth with respect to claim 1 above, but does not disclose an imaginary "effective anchor point".

However, Druzynski teaches a counter balance system for moving a metal plate from a horizontal position to a vertical position, such that a biasing member, such as springs (18) can be attached to a flexible member, such as chain (24) such that a center of gravity (50) of the metal plate (12) moves from a point over the flexible member (24) as shown in Fig. 4, to a point, passing through the attachment of the spring (18) and the flexible member (24), and over the biasing member, spring (18), as shown in fig. 5.

The changing of the center of gravity of the metal plate (12) "effectively" changes/lowers the spring force needed to move plate (12) from a horizontal position to a vertical position. See cols. 3-4.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with the counter balance assembly as taught by Druzynski, in order to minimize the spring forces required to rotate the ramp assembly to a vertical position. See Col. 3, ln. 1-col. 4, ln. 32.

In regards to claims 7-9 Beckwith et al. discloses the claimed dock leveler as put forth with respect to claim 1 above, but does not disclose the use of a cam plate, as claimed. However, Druzynski teaches a counter-balance system for biasing a metal plate (12) between a horizontal and a vertical position. Said system comprising a cam plate (26) having at least one cam surface that selectively engages the flexible member (24), and is shaped to deflect the line of action of the spring force, as the plate (12) rotates. Wherein said biasing members (18) are coupled to a base assembly (28) at said 2<sup>nd</sup> anchor point. Said cam plate (26) having an anchor hole at which the spring is fixedly coupled to the base assembly (28) via said flexible member/chain (24). Further wherein said at least one cam surface comprises upper cam surface and a lower cam surface, such that said anchor hole, flexible member (24) and said cam surfaces "cooperate" to deflect the line of action of the biasing springs (18), when plate (12) rotates about the pivot point (20). See Figs. 4, 5.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with the counter balance assembly as taught by Druzynski, in order to minimize the spring forces required to rotate the ramp assembly to a vertical position. See Col. 3, ln. 1-col. 4, ln. 32.

In regards to Claim 10 Beckwith et al. discloses the claimed dock leveler as put forth with respect to claim 1 above, to include the use of a weight (48) that creates a variable moment force, when the dock leveler is moved between said vertical and multiple lower positions. Wherein a low moment force is provided by the weight (48) when the ramp assembly is in the vertical position; and a high moment force is provided by the weight (48) when in the lower operating positions; but does not disclose the use of a cam plate. However, Druzynski teaches a spring-based, counter-weighted (34), counter-balance system for biasing a metal plate toward a vertical position; wherein said counterbalance system further comprises:

A cam surface (on element 26) having a lower cam surface that is configured to provide a spring moment, in combination with said spring (18) that is less than the weight of the metal plate when the plate is a predetermined location. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with a flexible coupling member as taught by

Druzynski, in order to reduce the speed at which the ramp assembly is raised to a vertical position. See col. 3, lns. 12-22.

In regards to Claims 11-14 Beckwith et al. discloses a dock leveler as put forth with respect to claim 1 above, to include a counter balance weight (48) capable of creating a variable weight moment, and a spring moment that is greater than the weight moment of ramp assembly at least as the ramp assembly rotates above the horizontal operative position, the spring moment is approximately equal to the weight moment of the ramp assembly when the ramp assembly is in the stored position, and the dock leveler has a net moment which can vary as the ramp assembly rotates, as put forth above with respect to claim 10; and the net moment is in the downward direction when the ramp assembly is in the vertical, stored position; the net moment is in the upward direction when the ramp is moving between the horizontal and the vertical positions.

What Beckwith et al. does not disclose is a net moment that is approximately zero at a position between the vertical stored position and the one or more operative positions.

However, Druzynski teaches a counter-balance assembly for raising a metal plate (12) from a horizontal position to a vertical position, wherein the net moment of the plate is considered zero when the plate is in the vertical position and can be approximately zero between the horizontal and vertical positions such that a preload can be provided to the spring force in order to offset the difference in the rate of change in force exerted by the plate (12) versus the force of the extension spring (18) as the plate (12) moves from the

Art Unit: 3671

horizontal to the vertical position. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with a flexible coupling member as taught by Druzynski, in order to reduce the speed at which the ramp assembly is raised to a vertical position. See col. 3, Ins. 12-22.

In regards to claim 15 Beckwith et al., discloses a dock leveler wherein a generally horizontal working range includes positions where an end of the ramp assembly is about 8" above and about 8" below the horizontal. See col. 2, Ins. 10-37.

In regards to claims 16-18 Beckwith et al. discloses a counter-balance assembly for a mechanically-operated, vertically-stored dock leveler having a rotating ramp assembly (24, 28, 44) comprising:

Tension means, in the form of a spring (36), having 1<sup>st</sup> and 2<sup>nd</sup> ends, for counter balancing the ramp assembly of the dock leveler.

Means (20) for fixedly coupling the 1<sup>st</sup> end of said tension means to the ramp assembly at a 1<sup>st</sup> anchor point.

Means (42) for fixedly coupling said 2<sup>nd</sup> end of said tension means to a base assembly (34) of the dock leveler at a 2<sup>nd</sup> anchor point (42).

What Beckwith et al. does not disclose is the use of a flexible coupling means, in the form of a chain, band, or cable; nor the use of a camming means for deflecting the

tension means.

However, Druzynski teaches a spring (18)-based, counter balance system for biasing a metal plate from a horizontal position to a vertical position, comprising:

A tension means (18) having a "direct line of action", such as a direction of spring force, that extends between 1<sup>st</sup> and 2<sup>nd</sup> spring anchor points, when movable plate (12) is disposed in a vertical or horizontal position; a means for fixedly coupling one end of the tension means to said movable plate (12); flexible coupling means for coupling the tension means to a base assembly (28); a camming means (26) that is capable of being configured to selectively engage the means for flexibly coupling such that the tension means (18) is deflected away from a "direct line of action"; as the movable plate rotates. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with a flexible coupling member as taught by Druzynski, in order to reduce the speed at which the ramp assembly is raised to a vertical position. See col. 3, Ins. 12-22.

In regards to claim 18 Beckwith discloses the means for fixedly coupling the 1<sup>st</sup> end comprises an adjusting bolt and a spring anchor bracket (42) and the means for flexibly coupling said 2<sup>nd</sup> end comprises a chain.

In regards to claims 19-20 Beckwith et al. discloses a method for counterbalancing a mechanically-operating, vertically storing dock leveler (10) having a rotating ramp assembly (23, 44) attached to a base assembly (34, 22, 20, 12) at a pivot point (26)

The method comprising the steps of:

Coupling a spring (36) to the dock leveler with a non-flexible attachment device (44).

What Beckwith et al. does not disclose is the use of a flexible attachment device and a camming surface configured to deflect the spring away from a "direct line of action".

However, Druzynski teaches a spring (18)-based counter-balance system and a method of use comprising the steps of:

Coupling a spring (18) to a metal plate (12) with a flexible coupling member, such as a chain (24).

Providing a camming surface on element (26) to cooperate with the chain (24) to deflect the spring (18) away from a "direct line of action" in response to plate (12) rotation between a horizontal and vertical position. Wherein the camming surface is shaped to cause the spring to deflect toward a pivot point (20) as the ramp assembly rotates downwardly. See figs. 4, 5; cols. 3-4.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the dock leveler of Beckwith et al., with a flexible coupling member as taught by Druzynski, in order to reduce the speed at which the ramp assembly is raised to a vertical position. See col. 3, lns. 12-22.



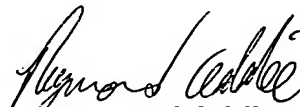
**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reed # 796,933 discloses an automatic door operating system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 703 305-0135. The examiner can normally be reached on 8-2, 6-8.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703 308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Raymond Addie**  
**Patent Examiner**  
**Group 3600**

12/8/04